

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

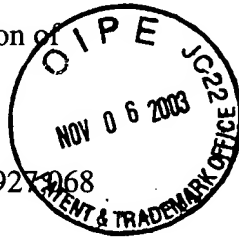
In re Patent Application of

Jianhui Chen et al.

Application No.: 09/927,068

Filed: August 9, 2001

For: COAXIAL ILLUMINATION SYSTEM



Group Art Unit: 2877

Examiner: G.J. Stock, Jr.

**DECLARATION OF WARD L. DIXON  
UNDER RULE 131**121 Spear Street, Suite 290  
San Francisco, CA 94105  
(415) 512-1312Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450**CERTIFICATE OF MAILING**I hereby certify that this correspondence is being deposited  
with the United States Postal Service as First Class Mail in an  
envelope, addressed to: Commissioner for Patents, P.O.  
Box 1450, Alexandria, VA 22313-1450 on Nov. 4, 2003.  
STALLMAN & POLLOCK LLP

Dated: 11/4/2003

By:

Georgia K. Stith

Sir:

I, Ward R. Dixon, declare as follows:

1. I am currently the Mechanical Engineering Manager at Therma-Wave, Inc., the assignee of the above-identified patent application. I was employed by Therma-Wave, Inc., during all the events discussed herein.

2. In the time period prior to May 2, 2001, I was responsible for the optical and mechanical engineering for a next generation optical metrology tool in Therma-Wave's Opti-Probe product line. I worked under the direction of the program manager, Jianhui (Jay) Chen, one of the named inventors herein. In this capacity, one of my tasks was the implementation of a light source design. My responsibilities included detailed engineering design, generating the drawing package, ordering parts, and assembly, alignment and testing of the design.

3. I was originally given the conceptual layout for the light source by Jay Chen. I subsequently worked under the direction of both Jay and David Aikens (the other named inventor) to identify the specific design requirements; optics specifications, optical position tolerancing, required adjustments, thermal requirements, etc. I then worked under the guidance

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of Jay Chen to develop the detailed engineering design. Neither Jay Chen nor David Aikens is employed by Therma-Wave at the present time.

4. Exhibit 1 attached hereto is a drawing I generated of the design I was working on prior to May 2, 2001. This drawing was prepared prior to May 2, 2001, as part of the light source requirements design review. The letters (A-F) identifying various elements have been added to this drawing to facilitate this discussion. This design corresponds to the invention being claimed in the above-identified application.

5. Referring to Exhibit 1, item A, in the lower left corner is the housing for a tungsten lamp. Item B is the location of the lens used to image the tungsten bulb into the transparent housing of deuterium lamp, item C. Item D is a focusing mirror which focuses an image of both the tungsten and deuterium lamps onto an aperture located at item E. Item F is a focusing mirror which converts the diverging light beam into a collimated beam. The collimated beam is then directed to optics (not shown) for focusing the beam onto the sample.

6. Exhibit 2 is two pages (20, 21) from my notebook. These notebook pages represent testing I did on a light source having the configuration of Exhibit 1. The data on these pages was taken prior to May 2, 2001.

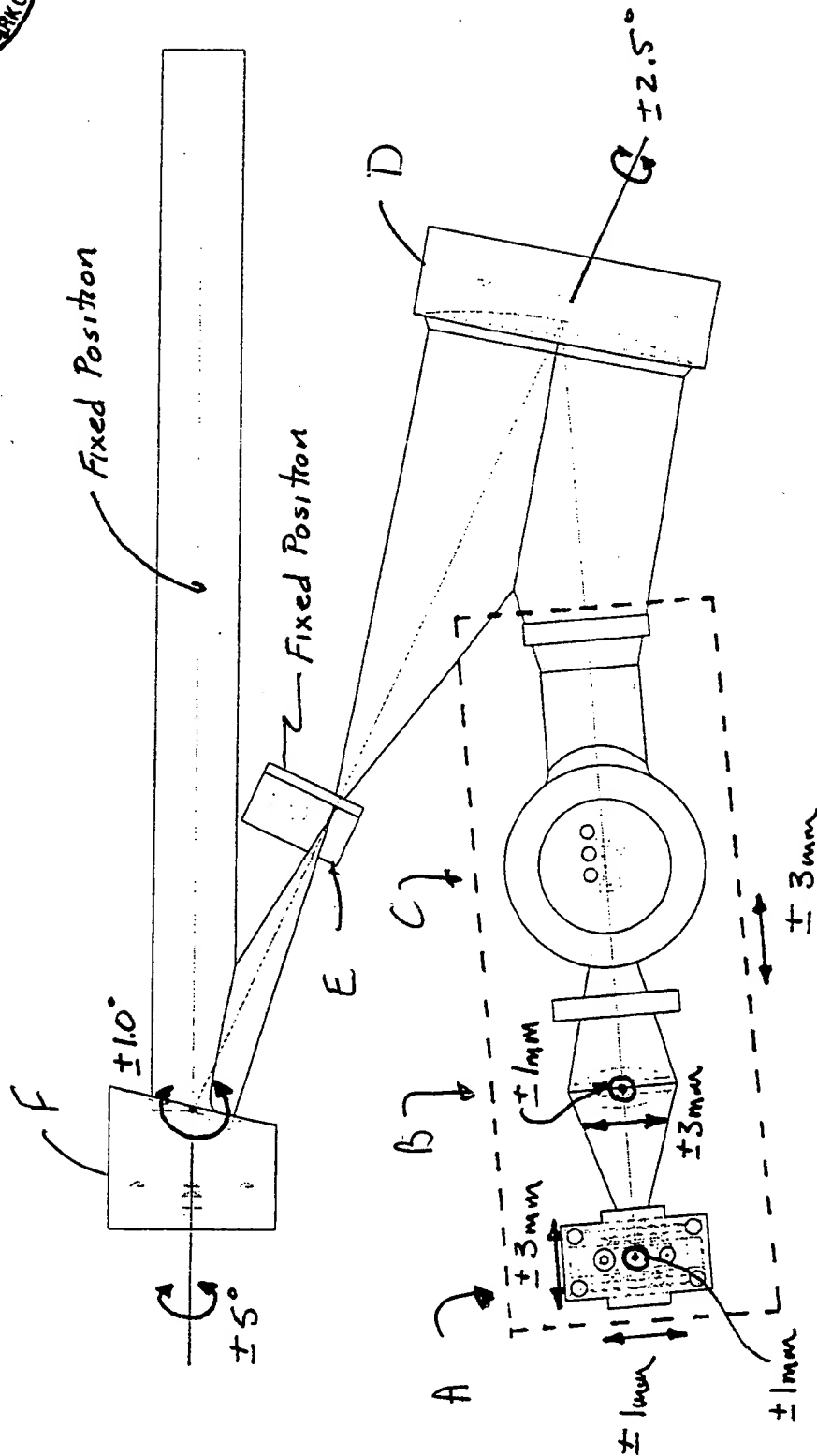
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under 18 U.S.C. § 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Dated: 3 - Nov. - 2003

By: Ward R. Dixon

Ward R. Dixon

# Neptune UV and White Light Source Redesign Added Adjustments



New Light Source (P/N 18-25672)

UV-on, WL-on, Fan-on upper tube

<u>Time</u>	<u>Bulb Temp</u>
0	20°C
<del>3</del>	205°C
5	265°C
10	304°C
20	315°C

Moved Fan hose to lower tube @ 20 min

<u>Time</u>	<u>Bulb Temp</u>
25	311°C
30	308°C
<del>40</del>	311°C

Removed filter window from rear side of UV bulb.

<u>Time</u>	<u>Bulb Temp</u>
0	19°C
<del>4</del>	205°C
<del>8</del>	247°C
31	257°C

Replaced filter window at rear side of UV bulb

Added baffel



<u>Time</u>	<u>Bulb Temp</u>
0	18°C
1	169°C
2	228°C
5	289°C
46	319°C

Move fan to lower exhaust @ 46 min

<u>Time (min)</u>	<u>Bulb Temp</u>
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51	26.9 °C
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70	26.8 °C
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180 min	26.9 °C
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